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10/038,120	11/09/2001	Bing Zhou	15913.6.1	5527

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EXAMINER

JOHNSON, EDWARD M

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/038,120

Applicant(s)

ZHOU ET AL.

eh

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 17-29 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-16 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-16 is acknowledged. The traversal is on the ground(s) that the inventions are integral parts. This is not found persuasive for reasons already of record and because it is not the standard by which a proper restriction is made. The claimed inventions are distinct because the product could be used in a materially different process, and vice versa. The inventions are also shown to be distinct by classification and search. Further, even if the claimed process of using requires the claimed product, as Applicant asserts, the claimed product could still be used in a materially different process, the latter of which Applicant does not appear to dispute.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Lauder US 4,110,258.

Regarding claims 1 and 7, Lauder '258 discloses a catalyst compound for gaseous oxidation and NOx removal (see abstract and column 1, lines 11-17) having the general chemical formula  $ABO_3$  (1:1 molar ratio of A and B), wherein A is 100% barium metal ions and B is up to 20% platinum metal ions with the balance of B being nonplatinum metal (see column 2, lines 42-54) such as iron, cobalt, or copper (see column 5, lines 19-22 and 43-44); wherein the compound has a crystal structure (abstract); dispersed on a binder having a surface area of about 200 square meters per gram (see column 7, lines 19-23).

Regarding claims 2, Lauder '258 discloses the general chemical formula  $ABO_3$ , which has a 1:1 molar ratio of barium to platinum/nonplatinum metals (abstract).

Regarding claim 6, Lauder '258 discloses the catalyst dispersed on a binder having a surface area of about 200 square meters per gram (see column 7, lines 19-23).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lauder '258.

Regarding claims 3 and 5, Lauder '258 fails to specifically disclose the claimed ratio of Ba/La:Cu/Mn/Pt.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a 0.1:1 to 5:1 ratio of Ba:Cu/Mn/Pt in the catalyst of Lauder because Lauder discloses a 1:1 molar ratio of barium to platinum/nonplatinum metals (see above) wherein among the disclosed nonplatinum metals are preferably copper and manganese, which would lead one of ordinary skill to select those metals in the claimed ratio with a reasonable expectation of achieving a favorable result, since the disclosed ratio (1:1) is much more specific than the claimed ratio even though the disclosed range of possible metals is broader.

***Allowable Subject Matter***

6. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

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independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 8-16 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: The molar ratio of adsorption to oxidation metals of 0.2:1 to 2:1 wherein the adsorption metal oxide is lanthanum and the oxidation metal oxide components are copper and manganese promoted with platinum in the bi-functional catalyst for adsorption and oxidation of the instant claim 4 would not have been obvious to one of ordinary skill in the art at the time the invention was made. It also would not have been obvious to one of ordinary skill in the art at the time the invention was made to mix the adsorption and oxidation function metal ion solutions together and dry at 500-800 degrees Celsius for 0.4-5 hours and then form and impregnate a second solution of oxidation and platinum in the method of the instant claims 8 and 12.

#### **Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kurokawa et al. US 6,066,587 discloses a catalyst comprising platinum and other metals for treatment of NOx and HC (see abstract

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and Examples); Lott et al. US 5,795,553 discloses a NOx adsorbing catalyst comprising alkali and copper coped calcined material coated onto ceramic beads (see abstract, Examples).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.

EMJ

  
STANLEY S. SILVERMAN  
SUPERVISORY PATENT EXAMINER  
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